

PELVIC FLOOR DYSFUNCTION

EXERCISE INSTRUCTIONS

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Pelvic floor dysfunction results from inappropriate functioning of pelvic muscles and ligaments. Up to half (50 %) of all postpartum women suffer from some form of pelvic floor dysfunction. However, pelvic floor dysfunction symptoms, which can also affect men can be caused by many other reasons such as weakness of the component muscles, neurological, urological, and gynecological diseases, post-surgical conditions, chronic coughing, and also certain congenital and genetic causes. Obesity, the natural aging process as well as insufficient, excessive or inappropriate physical activity may also play an important role. Pelvic floor dysfunction is manifested by incontinence (i.e. unwanted leakage) of urine and/or feces, frequent urination, constipation, insufficient defecation, pelvic and lumbar pain, pain during sex, and pelvic organ prolapse, i.e. descent and change in the pelvic organs position. Rehabilitation and an appropriate exercise regimen are an important part of the therapy for these symptoms.

This leaflet is a guide to improving pelvic floor function with exercises and appropriate physical activities.



Explanation of terms

Stress incontinence: is leakage of urine and/or stool during stress maneuvers. Stress maneuvers are situations increasing pressure in the abdominal cavity, such as coughing, sneezing, jumping, or lifting loads.

Urgency: is a strong and sudden need to urinate or to defecate that is difficult to delay. It can lead to leakage of urine and/or feces.

Urge incontinence: is a sudden intense urge to urinate and/or to pass stool associated with involuntary leakage of urine/feces.

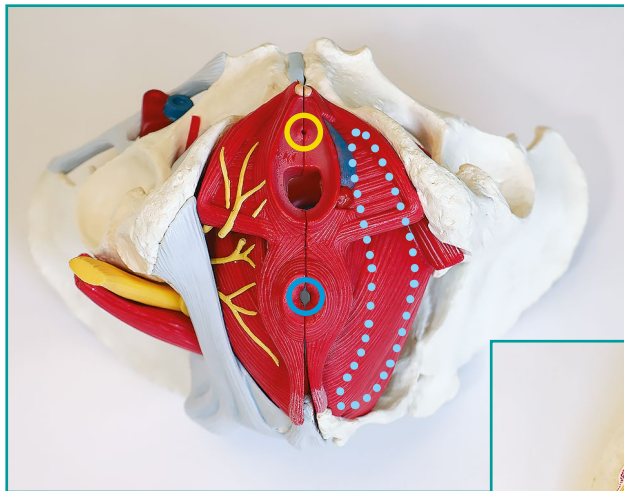
Bladder/bowel drill: is the activation of the pelvic floor muscles that suppresses the urge to urinate/ or defecate.

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Pelvic floor muscles

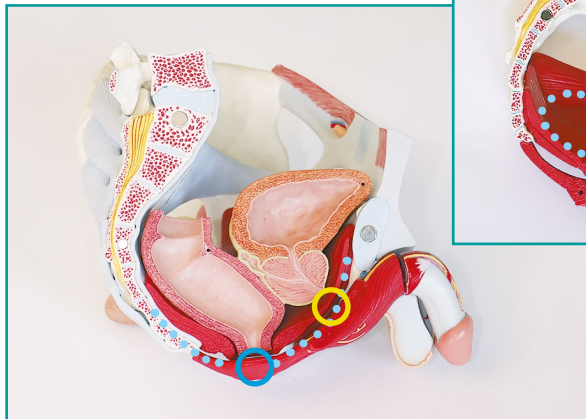
From a functional point of view, two main structures of the pelvic floor muscles can be distinguished: the levator ani muscle and the sphincters (urethral sphincter and anal sphincter). **The levator ani** is a bowl-shaped muscular net that extends from the crotch to the coccyx and attaches to the bottom rim of the pelvic bones. Its function is to support the bladder and intestines, maintaining its position at all times, even during challenging situations such as coughing, and at the same time constricting the urethra and rectum to maintain urine and stool continence. **The sphincters** are circular muscular structures encircling the urethra and the rectum. The function of the sphincters is specifically to compress and close the two passages thus retaining urine and stool.



Levator ani

Anal sphincter

Urethral sphincter



Activation of the pelvic floor muscles

Position

Lie on the back, the head can be supported by a small pillow, the legs are slightly bent at the knees and hips, resting on the heels which are hip width apart. If you cannot keep your legs comfortably in position, support your knees with a large pillow or rolled up blanket.



Exercise

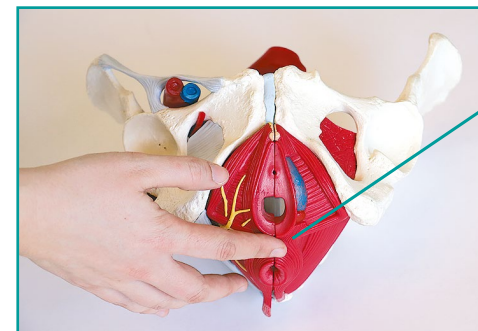
Slightly pull the vagina into your abdomen (woman)/try to pull the penis root slightly in as if you wanted to make it shorter (man). Then, compress the urethra and contract the anal muscles slightly as if you wanted to stop emptying, your bladder or bowel, hold the contraction for 1-2 seconds, then relax pelvic floor completely. Repeat the exercise 5 times, taking a 10 seconds pause between each contraction. Practice without too much effort, only using about 60 % of the maximum contraction possible.

Modifications

Perform the exercises in sitting, standing, and in other positions.

Mistakes

Holding the breath; clenching abdominal muscles, buttocks and thighs; clenching with excessive force; too brief resting periods between the contractions. Never train the muscles by interrupting actual urination or defecation.



If you are not sure about your pelvic floor muscles activity, try to check by palpation: place your fingers on the pelvic floor in front of your anus. During activation, you should feel a retraction (lift) of approximately 0.5-1 cm and a contraction of the rectum.

Relaxation of the pelvic floor muscles

The pelvic floor muscles are often contracted and in spasm in most people. Perform relaxation exercises at least once a day, optimally before and after pelvic floor strengthening exercises. Alternate the relaxation exercises as you wish.

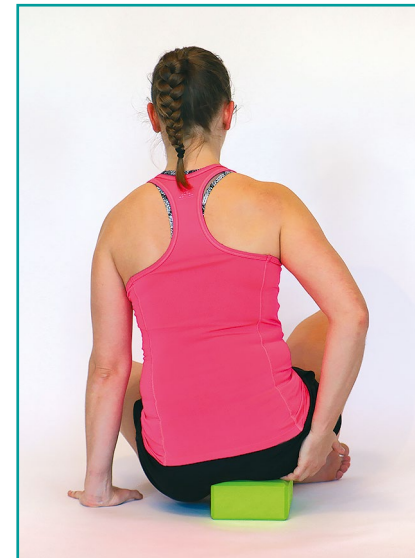
Position

Lie on your stomach with your head resting comfortably on your forehead or on one cheek, legs relaxed with toes turned in, heels apart, palms resting on your buttocks towards the anus.



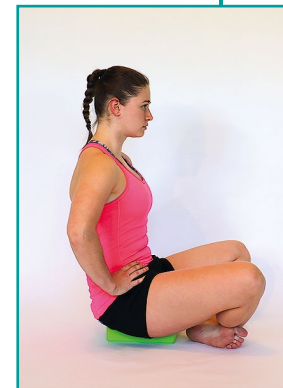
Exercise

Pull the vagina or penis in, squeeze the anus and contract the buttocks. Do everything slightly. Hold the activity for 10 seconds, then inhale and slowly relax with the exhalation. Encourage the relaxation by gently spreading your buttocks apart using your hands. Breathe naturally and focus on pelvic floor and buttocks relaxation for at least 30 seconds. Then repeat the exercise 1 or 2 more times.



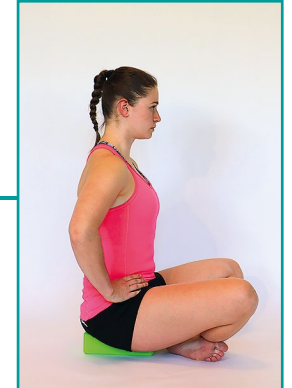
Position

Sit on a folded towel on a taller chair, with your legs relaxed with feet soles either supported or unsupported. Using your hands pull the buttocks slightly apart. Tilt the pelvis forward (back arches slightly), then backwards (back slouches slightly), and finally stop midway between the two positions. The head-shoulders-ribs rest in one block above the pelvis, the back is straight without increased lordosis or slouching, back muscles are relaxed.



Exercise

Pull the vagina or penis in as if pulling it away from a towel into the abdomen, squeeze the anus gently. Hold the activity for 10 seconds, then inhale and slowly relax with exhalation. Breathe naturally into the abdomen and pelvis. During inhalation you may feel the pelvic floor muscles slightly flexing towards the towel, and a slight lift with exhalation. Once you are well aware of your pelvic floor muscles activity you do not need to support the pelvic floor region with the folded towel.



Modifications

You can also perform this exercise in a cross legged sitting position on a small semi-inflated rehabilitation ball or on a yoga block lengthwise on its narrow edge.

Pelvic floor muscles strengthenings

The pelvic floor muscles can be strengthened by increasing the number of repetitions and/or increasing the duration of the muscle contraction. Do not clench other muscles (buttocks, abdominals, thighs), and remember to breathe naturally at all times.

Conditioning exercises: Gently pull in and squeeze the pelvic floor muscles 5 times in a row. Take a 10 second pause between each squeeze. Then rest for 30 seconds and repeat two more times the 5 squeezes series, including the 10 second pauses in between. Thus, you will complete 15 repetitions (3x5 contractions).

Modifications to increase fitness: Exercise while lying down, sitting or standing. Increase the number of repetitions gradually week by week to 3x6 contractions, 3x7 contractions, etc.

Endurance exercise: Pull in the vagina or the penis and squeeze the anus gently. Keep this activation for 5 seconds on 40 - 60 % of your maximum possible contraction. Then relax. Repeat several times always pausing and relaxing for 10 seconds between the contractions.

Modifications to increase endurance: Perform the exercise while lying down, sitting or standing. Increase the duration of contraction gradually. Optimally, keep the muscles squeezed for at least 20 to 30 seconds, without twitching, or holding your breath.

Exercise to reduce stress urine or stool incontinence

To reduce urine/stool leakage during stress maneuvers, i.e. in situations when the intra-abdominal pressure increases (coughing, jumping, etc.), gently draw in and squeeze the pelvic floor muscles before starting the movement or maneuver (lifting a load, jump, cough). Such pre-activation will improve the sphincter's ability to resist the increased pressure and prevent urine and/or stool leakage. After completing a maneuver, relax the muscles. This training is also helpful in individuals suffering from chronic forceful coughing, for example in patients with asthma or respiratory infections.

Training to reduce urgency, urge incontinence Bladder drill, bowel drill

As soon as you feel urgency, i.e. a sudden irresistible need to urinate or pass a stool, pause slowly, gently draw in and contract the pelvic floor muscles (60 % of your maximum capacity will be enough) and wait until the urge has fully subsided. Only then relax the muscles. First, practice at home by the toilet. If you can effectively delay or suppress the urge, try the same anywhere in the apartment. Use the drill away from home only after you have practiced this skill at home and you know for how long you are able to reliably delay urination/defecation.

Affecting the constipation, and the feeling of imperfect bladder emptying

Ensure adequate fluid intake. If you have night-time urges, avoid taking in fluids less than 2 hours before going to bed. Follow a rational, balanced diet. When defecating, slightly elevate your feet to a higher position, use a low stool to support your feet, or bend your trunk over. Fully relax the pelvic floor muscles, breathe naturally for a while before pushing gently and slowly into the rectum. Focus on pelvic floor muscles relaxation. When emptying urine or stool you can gently stroke the lower abdomen with your hand.

Relaxation of the spine

Exercise spinal relaxation every day, preferably in the morning. Repeat each exercise 5 times or as needed. Perform all movements slowly and smoothly, and gradually increase the range of motion. Remember to breathe naturally during the exercise. Optimal spinal mobility is important to ensure correct posture and thus ideal loading of the pelvic floor muscles.

Position

Kneel on all fours with your hands placed shoulder-width apart, support on your palms with your fingers pointing forward, keep your knees shoulder-width apart with your shins and toes gently pressed against the mat.

Exercise

Increase lumbar lordosis slowly during inhalation and then, smoothly arch the spine into flexion during exhalation.



Mistakes

Shoulders pulled up to the ears; fingers bent, elbows bent, toes lifted off the mat.



Position

From a position on all fours, sit back on your heels with your arms stretched forward and slightly apart (if you cannot sit down due to pain or stiffness, place a larger cushion between your heels and the buttocks).

Exercise

Slide both hands to the left until you feel a pull in your right side. Press your hands gently into the mat and stretch your right buttock backwards, feel a good stretch on the right. Repeat the exercise on the other side.



Position

Kneel on all fours, hands shoulder width apart, support on your palms, knees shoulder width apart, support on knees and shins.



Exercise

Place one elbow on the mat, keep the other arm extended, then return to the start position and alternate the arms.

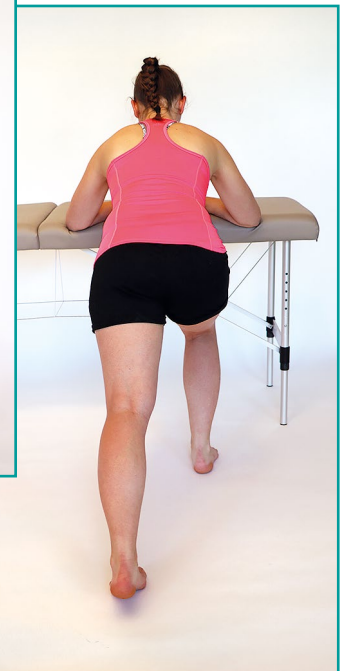
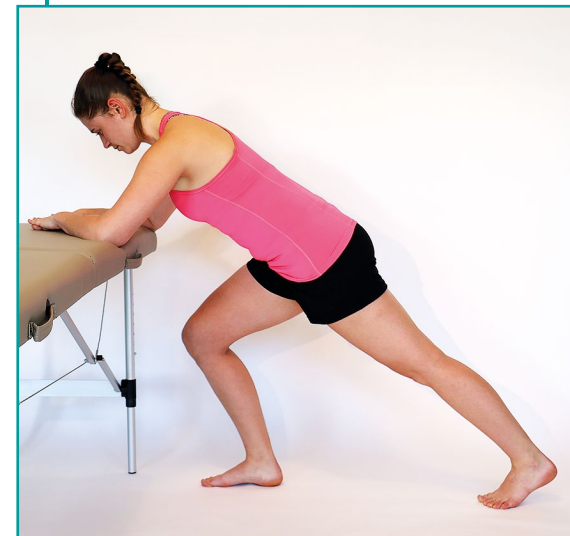


Stretching the lower limbs muscles

Perform the stretching of the leg muscle once a day. Adjust your position so that you feel a slight and comfortable pull in your muscles, and while maintaining the position gradually increase the stretch. For best results, repeat regularly. Don't forget to breathe naturally during the exercise with no breath holding. Excessive tension in the leg muscles can result in increased tension or even cramping of the pelvic floor muscles.

Position

Stand with elbows resting on a kitchen counter, windowsill or a higher cabinet, keep your spine straight, move one leg backwards, loading through the back leg on the toes with the heel lifted up, toes pointing straight ahead.



Exercise

Lower the heel of the back foot down towards the ground to feel the pull around the calf and the heel. Hold the stretch for at least 20 - 60 seconds and then change legs.

Mistakes

Head bowed; shoulders raised up towards the ears; spine arched or humped; forefoot turned out or in.

Position

Stand with elbows resting on a kitchen counter, windowsill or a higher cabinet, keep your spine straight, move one leg backwards, load through the back leg on the toes with the heel lifted up, keep your toes pointing straight ahead.



Exercise

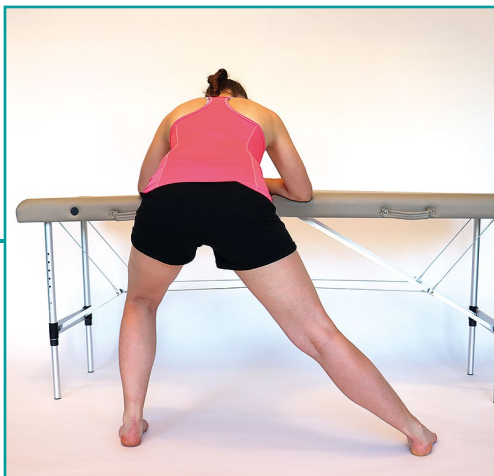
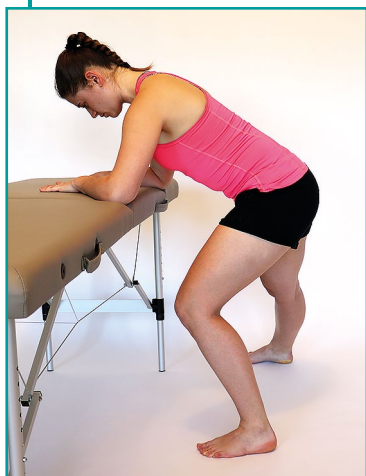
Shift your weight to your back leg, allowing your front leg knee to remain straight until you feel a pull on the back of the thigh and calf of your front leg. To promote the stretch, dorsiflex the ankle of the front leg. Hold the position for at least 20 to 60 seconds and then switch the legs.

Mistakes

Head bowed; shoulders raised up towards the ears; spine arched or humped.

Position

Stand with elbows resting on a kitchen counter, windowsill or higher cabinet, keep your spine straight, legs spread wide apart, feet firmly on the ground, toes pointing straight ahead.



Exercise

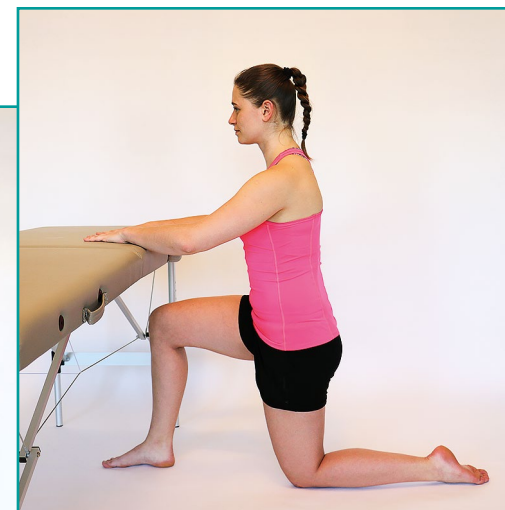
Flex your left knee, keeping the right knee straight, shifting your weight to the left until you feel the pull on the inner side of your right thigh. Hold the stretch for at least 20 to 60 seconds and then switch legs.

Mistakes

Head bowed; shoulders raised up towards the ears; spine arched or humped; flexed knee progresses too far in front of toes; flexed knee falls inwards or outwards; feet do not stay flat on the mat.

Position

Kneeling with arm resting on a furniture, spine straight, one leg kneeling on knee (may be supported by a towel or a cushion), other leg stepping forward, knee pointing over toes without progressing past the big toe, foot pointing straight ahead.



Exercise

Extend the tailbone towards the ground (elongating your low back) to reduce any excessive lumbar lordosis. Now move the pelvis gently forward until you feel a pull in the groin and on the front aspect of the thigh of the back leg. The head, hips and the supporting knee are in one line, the pelvis is horizontal without sloping to one side. Hold the stretch for at least 20 to 40 seconds and then switch the legs.

Mistakes

Head bowed; shoulders raised up towards the ears; spine arched or flexed; buttocks pushed sideways, knee of the front leg falling inwards, forefoot turned out or in.

Other regimen measures

Pelvic floor function is significantly influenced by a healthy lifestyle, which should be emphasized especially during the recovery period, for example after a delivery, surgery or infectious disease.

A balanced diet includes a sufficient supply of vegetables, fibre (10 - 20 g/day) and high quality protein, avoid too much refined sugar. Optimal fluid intake should be between 2 - 3 liters a day (30 - 35 ml/1 kg body weight) with exclusion or at least reduction of irritants such as carbonated drinks, acidic drinks, or excessive consumption of coffee or tea. The pelvic floor is a part of the trunk muscle system playing an important role in maintaining the upright posture. Poor posture and obesity lead to impaired pelvic floor function possibly promoting urinary and/or stool leakage. 5 - 10 % weight loss in obese individuals reduces urinary incontinence. Appropriate physical activities such as fast walking for at least 20 minutes per day, cycling, skiing, skating, adequate weight training, yoga, etc may be considered. Conversely, concussive or high impact activities such as running, trampoline jumping, or lifting heavy weights can lead to overstrain causing or worsening incontinence symptoms in both unfit but also overtrained individuals. Therefore, such demanding types of physical activities should be included in the exercise regime only after the ability to maintain continence during easier exercises is achieved.



Given that incontinence can be caused or promoted by the lack of physical activity, obesity, and infectious diseases with coughing, i.e. situations significantly associated with the Covid 19 pandemic, we can expect to see these health issues more frequently during and after Covid infections.

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